

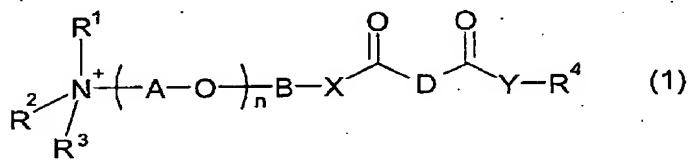
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Attorney's Docket: 2003DE409  
 Serial No.: 10/783,407  
 Art Unit 1712

Response to Office Action mailed 10/17/2006

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Previously Presented) A method for inhibiting corrosion and gas hydrate formation, said method comprising adding to a mixture of hydrocarbons and water a compound of formula (1)

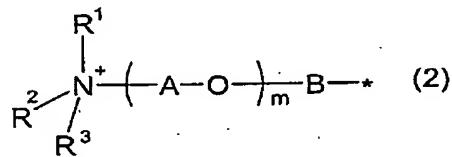


where

R<sup>1</sup>, R<sup>2</sup> are each independently C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl,

R<sup>3</sup> is C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl,  
 -CHR<sup>5</sup>-COO<sup>-</sup> or -O<sup>-</sup>,

R<sup>4</sup> is a radical of the formula (2)



m is a number from 0 to 30,

is M, hydrogen or an organic radical having from 1 to 100 carbon atoms,

A is a C<sub>2</sub>- to C<sub>4</sub>-alkylene group,

B is a C<sub>1</sub>- to C<sub>10</sub>-alkylene group,

D is an organic radical optionally containing heteroatoms and has [having] from 1 to 600 carbon atoms, said organic radical being selected from the group

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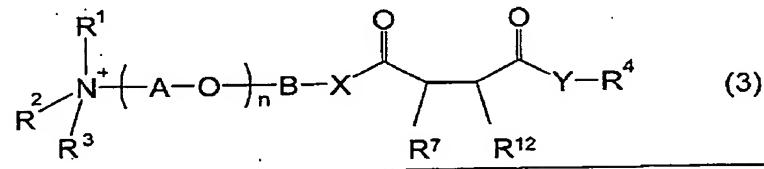
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consisting of

a straight-chain or branched C<sub>2</sub>- to C<sub>50</sub>-alkylene group or a straight-chain or branched C<sub>2</sub>- to C<sub>50</sub>-alkenylene group which is derived from a saturated or unsaturated dicarboxylic acid,

a C<sub>6</sub>- to C<sub>50</sub>-aryl radical or a C<sub>6</sub>- to C<sub>50</sub>-aryalkyl radical which is derived from a benzenedicarboxylic acid, and

a radical of formula(3)



where R<sup>7</sup> and R<sup>12</sup> are each either hydrogen or a C<sub>2</sub>- to C<sub>100</sub>-alkyl or C<sub>2</sub>- to C<sub>100</sub>-alkenyl radical and wherein bonding of D occurs through any valence within R<sup>7</sup> or R<sup>12</sup>

X, Y are each independently O or NR<sup>6</sup>,

R<sup>5</sup>, R<sup>6</sup> are each independently hydrogen, C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl, and

M is a cation

n is a number from 1 to 30.

2.(Previously Presented) The method of claim 1, wherein A is an ethylene or propylene group.

3.(Previously Presented) The method of claim 1, wherein B is a C<sub>2</sub>- to C<sub>4</sub>-alkylene group.

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4.(Previously Presented) The method of claim 1, wherein R<sup>1</sup> and R<sup>2</sup> are each independently an alkyl or alkenyl group of from 2 to 14 carbon atoms.

5.(Previously Presented) The method of claim 1, wherein R<sup>3</sup> is an alkyl or alkenyl group having from 1 to 12 carbon atoms.

6.(Previously Presented) The method of claim 1, wherein R<sup>5</sup> and R<sup>6</sup> are hydrogen.

7.(Previously Presented) The method of claim 1, wherein n is a number in the range from 1 to 10.

8.(Canceled)

9.(Previously Presented) The method of claim 1, wherein D is a C<sub>2</sub>- to C<sub>50</sub>-alkylene or C<sub>2</sub>- to C<sub>50</sub>-alkenylene group.

10.(Previously Presented) The method of claim 1, wherein D is derived from a substituted succinic acid derivative having from 10 to 100 carbon atoms.

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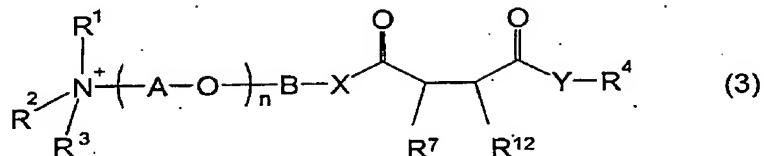
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11.(Currently Amended) The method of claim 1, wherein D is a radical of the formula (3)

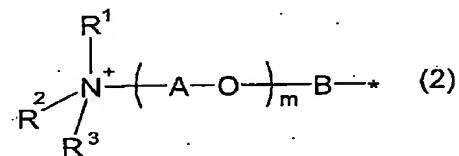


where

$\text{R}^7$  and  $\text{R}^{12}$  are each either hydrogen or a C<sub>2</sub>- to C<sub>100</sub>-alkyl or C<sub>2</sub>- to C<sub>100</sub>-alkenyl radical which is obtainable as an oligomer of C<sub>2</sub>- to C<sub>8</sub>-alkenes and may be straight-chain or branched, with the proviso that exactly one of the  $\text{R}^7$  and  $\text{R}^{12}$  radicals is hydrogen wherein bonding of D occurs through any valence within R<sup>7</sup> or R<sup>12</sup>, and  $\text{R}^1$ ,  $\text{R}^2$  are each independently C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl,

$\text{R}^3$  is C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl, -CHR<sup>5</sup>-COO<sup>-</sup> or -O<sup>-</sup>,

$\text{R}^4$  is M, hydrogen or an organic radical having from 1 to 100 carbon atoms, a radical of the formula (2)



- A is a C<sub>2</sub>- to C<sub>4</sub>-alkylene group,
- B is a C<sub>1</sub>- to C<sub>10</sub>-alkylene group,
- X, Y are each independently O or NR<sup>6</sup>,
- n is a number from 1 to 30.

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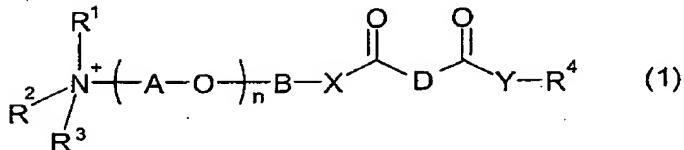
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12.(Withdrawn)

A compound of the formula (1)



where

R<sup>1</sup>, R<sup>2</sup> are each independently C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl,

R<sup>3</sup> is C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl,  
-CHR<sup>5</sup>-COO<sup>-</sup> or -O<sup>-</sup>,

R<sup>4</sup> is M, hydrogen or an organic radical having from 1 to 100 carbon atoms,

A is a C<sub>2</sub>- to C<sub>4</sub>-alkylene group,

B is a C<sub>1</sub>- to C<sub>10</sub>-alkylene group,

D is an organic radical having from 1 to 600 carbon atoms,

X, Y are each independently O or NR<sup>6</sup>,

R<sup>5</sup>, R<sup>6</sup> are each independently hydrogen, C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl, and

M is a cation

n is a number from 1 to 30.

13.(Canceled)

14.(Canceled)

15.(Withdrawn) The compound of claim 12, wherein R<sup>4</sup> contains heteroatoms.

16.(Withdrawn) The compound of claim 12, wherein D contains heteroatoms.